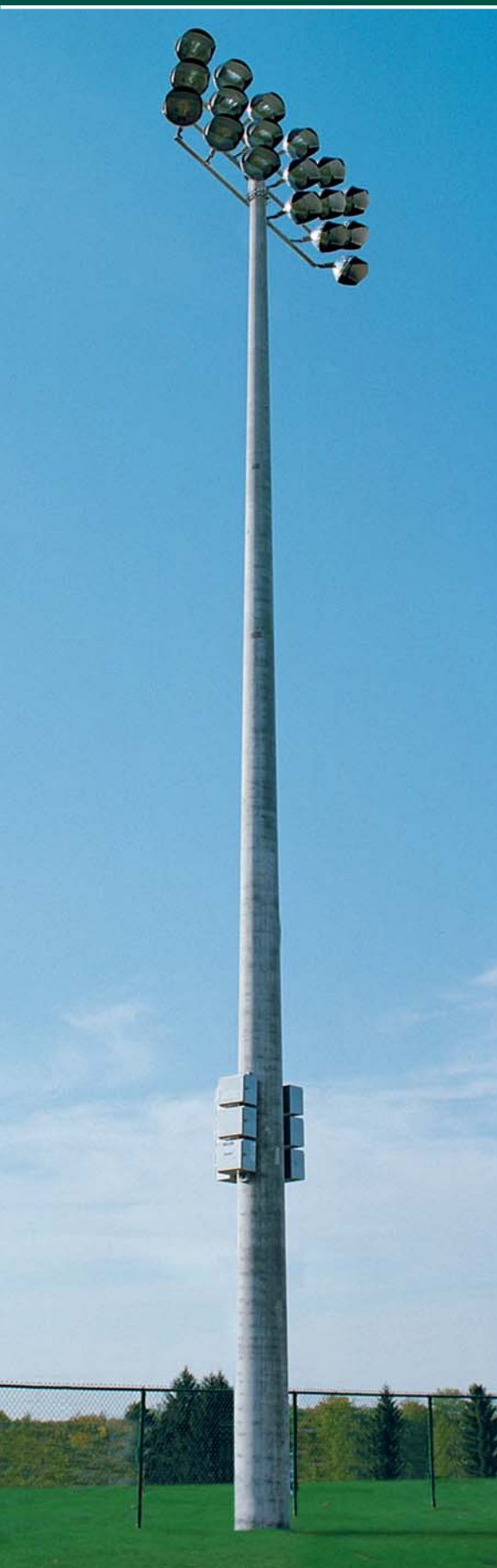


S P O R T S L I G H T I N G P O L E S



 StressCrete

PRIDE IN OUR PEOPLE. PRIDE IN OUR PRODUCT.



Our Companies

StressCrete is the registered trade mark of StressCrete Group with facilities in Northport, Alabama, Atchison, Kansas and Burlington, Ontario. StressCrete poles have been in use throughout North America since 1953.



Our Policy

It is our objective to use the most advanced technical knowledge available, plus state of the art equipment to manufacture the highest quality product possible. It is also our goal to offer our customers the highest level of service and technical backup possible. Our product is available through an experienced

and well educated team of manufacturers' agents who service utility, contractor and distributor accounts.

Our Product

Our product is a centrifugally cast reinforced concrete pole; commonly referred to as a "Spun Pole". It combines elegance with durability and surpasses most other materials in economy. It meets the CSA and ASTM standards for spun concrete poles, as well as our own specifications which are more demanding.



The spinning process introduces qualities into the concrete which cannot be obtained by more conventional casting methods. It provides a higher density and greater strength concrete which is more resistant to freeze-



thaw and scaling by de-icers. As well, the centrifugal casting process automatically forms a hollow raceway inside the pole thereby providing a smooth conduit for electrical cables.

All our poles are custom made whatever the design. An individual work order is issued to the plant, a copy is sent to the customer and one held in our files. Production is geared to your order specification and delivery requirements.

Poles are readily available in a full range of lengths, strengths, colors, finishes and cross-sections for a multitude of uses such as lighting, power distribution, transmission, traffic, traction and communication towers.

Most poles may be equipped with steel base plates for flush mounting installations, although direct embedment is the norm.

Burial Details

Spun concrete poles are generally direct buried eliminating the need for expensive anchor base footings.

However, if required, base plate mounted poles can be supplied for most pole types.

Under normal conditions, a concrete pole can be set "directly" into an augured hole, backfilling with the earth augured from the hole, tamping every 4" (10cm).

In situations where poles have large loadings, heavy imbalanced loads, or where soil bearing strengths are in question, an engineered base design may be required.

In almost all cases the bases are less expensive than base plate mounted bases.

In all but extreme cases, all that may be required is a slight increase in bearing surface below grade. This can be achieved in a number of ways. The easiest is by simply setting the pole deeper, or by auguring a larger hole and backfilling with concrete or limestone screenings, (limestone screenings are almost equal to concrete backfill when tamped damp in 4" layers and, will allow easy removal if damage occurs to the pole).

Remember when in doubt call in an expert.

Facts About Direct Embedded Spun Concrete Poles

StressCrete's Direct Embedded Concrete poles will save you time and money.

Time Savings

Installation takes time and time means money to you. Direct embedded poles can be installed in as little as one-half hour from start to finish, freeing the time of manpower and equipment.

Monetary Savings

It stands to reason that you can buy an extra few feet of pole for less money than it would take to design and build an anchor base. In some cases the cost of the anchor base alone is equal to the total cost of a direct embedded concrete pole.

Appearance Another Big Plus

Direct embedment of concrete poles means no unsightly base plates to hide or nuts to cover. Pour concrete, lay asphalt or sod grass around the base of the pole... So Neat... So Simple... So Cost Effective...

Follow Five Easy Steps to Ensure Proper Installation

- 1) Use the fish wire provided to pre-wire the pole then install arms, luminaires etc., while pole is readily accessible.
- 2) Auger the setting hole - minimum auger size should be 8 to 10" greater in diameter than pole butt.
- 3) From the chart following, select backfill.
- 4) To install, choke the pole with a nylon sling 20% to 25% of pole length from top, attach the sling to hook and lift allowing butt to rest on ground until vertical. Now lift pole and position over augured hole - lower until butt rests on bottom centre of hole.
- 5) While continuing to hold pole, add backfill, tamping every 4", check for plumbness using a plumb bob or instrument after which below grade wiring connection can be made. Remove sling and move to next pole while filling and tamping is continued to a point 2" above grade.

Direct Embedment of Sportslighting Poles

While no one disputes the cost effectiveness of spun concrete poles in street lighting applications, their obvious advantages should not be overlooked in such areas as sports, industrial and hi-mast lighting. In many cases the direct embedment procedure described in the Street Lighting Section can be followed here also, resulting in substantial time and money savings. A good Rule of Thumb is "bury 10% of overall length + 2 feet, backfill and tamp".

A word of caution should be given for installations where soil strengths are questionable and/or high strength poles are being used. In these cases an engineer should check that the soil has adequate bearing strength to withstand the overturning moment of the pole.

A soil report and engineer's stamp are mandatory before the construction of any two storey building can be

commenced. Surely it makes a lot of sense to provide the same information on a lighting project of the same or greater value, and up to five times the height.

The type of pole being used does not affect the size of the footing. Generally, a proper footing is one which, when given the soil strengths, will resist the overturning moment at grade. Whether concrete or another type of pole is used, if they have identical overturning moments and are in similar soils, the size of the base would be the same.

The advantage of concrete poles is that, unlike most other types, they can be direct buried into the ground without fear of rust or rot. In most cases this direct embedded portion is large enough to provide an adequate footing. If this should not be the case special footings must be used.

Recommended Backfill for Typical Soils

Good Soil

Compact well graded sand and gravel, hard clay or well graded fine and coarse sand (no standing water).

Use as is for backfill.

Medium Soil

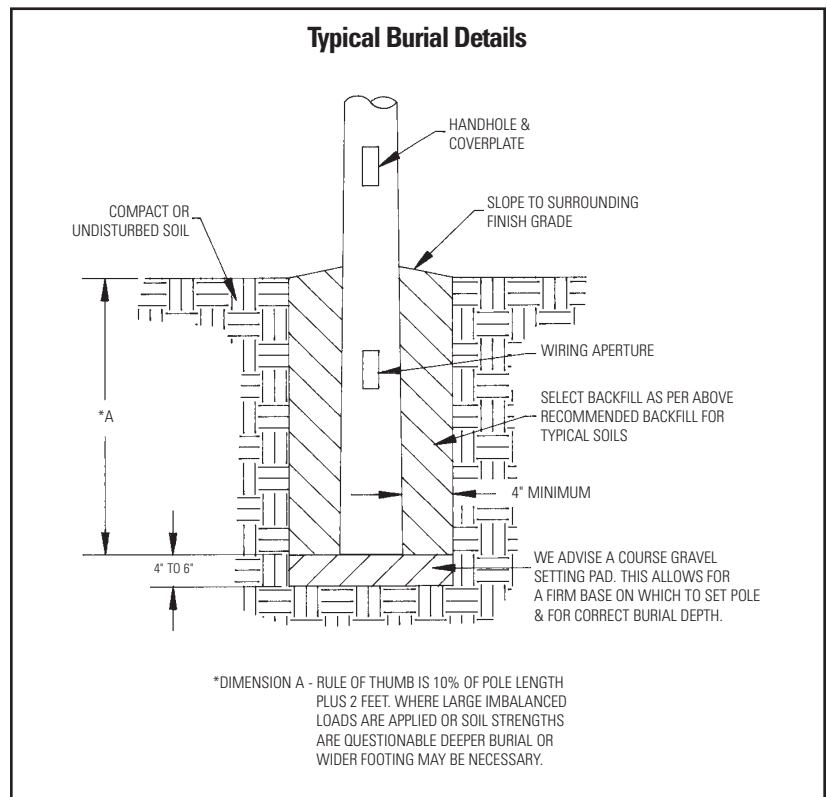
Compact fine sand and clay, compact sandy loam, loose coarse sand and gravel (no standing water).

Requires select backfill clean washed sand or 1/2" minus well graded gravel.

Poor Soil

Soft clay, clay loam, poorly compacted sand or clays containing large amounts of silts (standing water during wet season).

Use cementitious earth backfill - concrete - limestone screenings.



Product Design/Pole Classification

For almost all applications of spun concrete poles such as streetlighting, sports lighting and power distribution, the theoretical load is applied near the pole tip. Because of this most poles are selected by tip load computation.

In order to simplify ordering and cataloging, we have grouped our poles according to alphabetical classes, with a class being defined as minimum ultimate transverse load applied 2 ft. down from the pole tip. All poles which can sustain the same tip load have the same class.

The ground line moment capacity, depends on the pole length, since that moment is the product of the ultimate load and the distance between the point of application (2 ft. from the tip), and the ground line.

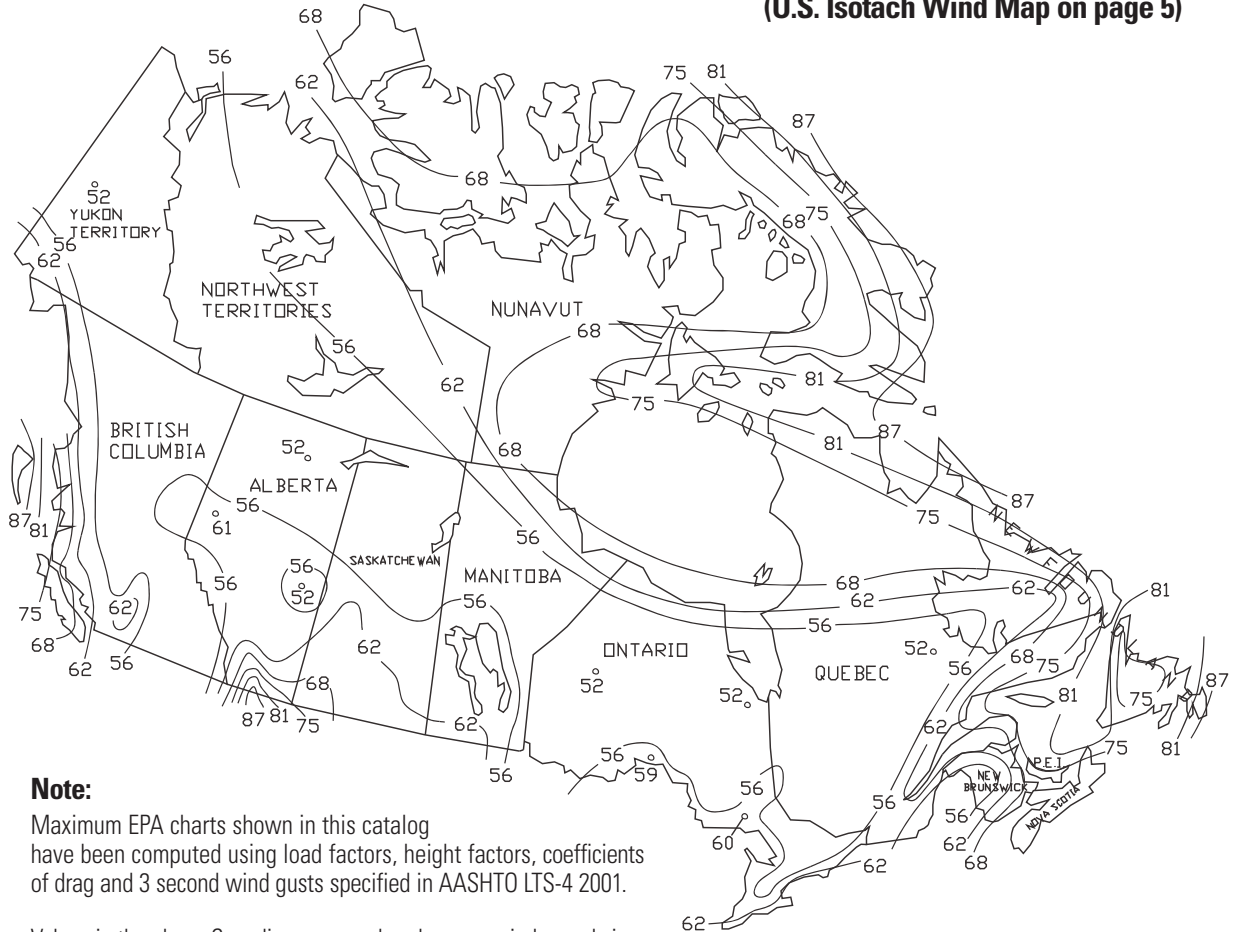
Concrete Pole Classification

Class Designation	Minimum Ultimate Transverse load (lbs)	Ultimate (KN)	Minimum Ultimate Torque (ft. - lbs)	Ultimate (KN-M)
AA	450	2.0	400	0.5
AL	600	2.7	600	0.8
A	600	2.7	1800	2.4
B	900	4.0	2700	3.6
C	1200	5.3	4800 (min)	6.4 (min)
D	1500	6.7		
E	1900	8.5		C to 0
F	2400	10.7		
G	3000	13.3		
H	3700	16.5		
J	4500	20.0		
K	5400	24.0		
L	6400	28.5		
M	7500	33.4		
N	8700	38.7		
O	10000	44.5		

The table shown summarizes the concrete classes.

Canada Isotach Wind Map

(U.S. Isotach Wind Map on page 5)



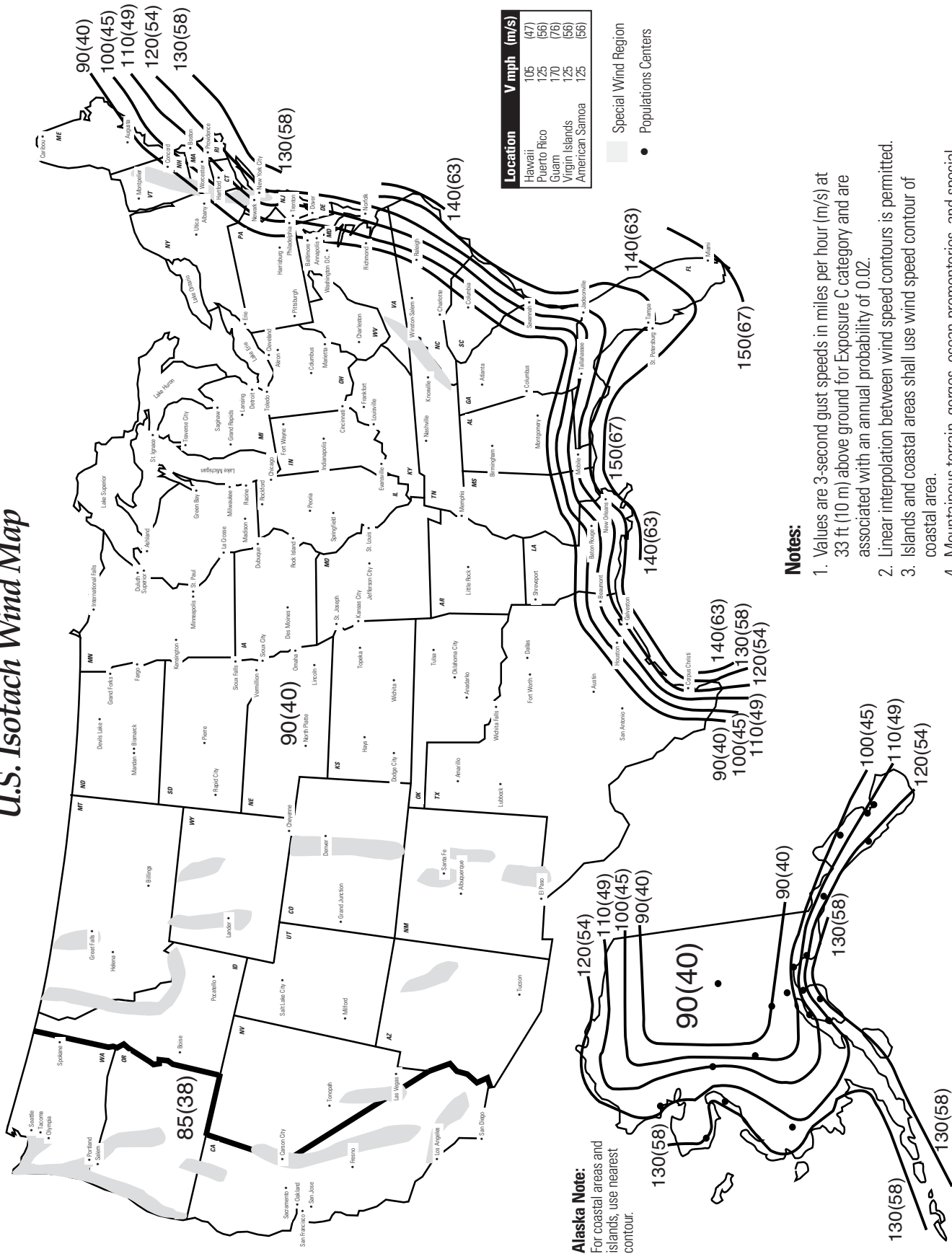
Note:

Maximum EPA charts shown in this catalog have been computed using load factors, height factors, coefficients of drag and 3 second wind gusts specified in AASHTO LTS-4 2001.

Values in the above Canadian map are hourly mean wind speeds in mph, which are less than 3 second gusts. Therefore, all wind speeds shown above are to be multiplied by a factor of 1.32 in order to utilize the StressCrete Maximum EPA values. (e.g. map shows 62 mph, $62 \times 1.32 = 81.84$ mph) The values shown are hourly mean wind speeds in mph at 10 m (32.8') above ground for terrain roughness category B.

* This map is used with permission of Canadian Standards Association. Material is reproduced from CSA Standard C22.3 No. 1-01, Overhead Systems which is copyrighted by Canadian Standards Association, 178 Rexdale Blvd., Toronto, Ontario, M9W 1R3. While use of this material has been authorized, CSA shall not be responsible for the manner in which the information is presented, nor for any interpretations thereof.

U.S. Isotach Wind Map



Notes:

1. Values are 3-second gust speeds in miles per hour (m/s) at 33 ft (10 m) above ground for Exposure C category and are associated with an annual probability of 0.02.
2. Linear interpolation between wind speed contours is permitted.
3. Islands and coastal areas shall use wind speed contour of coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

Alaska Note:
For coastal areas and islands, use nearest contour.

Standard Sportslighting Specifications

- Scope** These specifications apply to the manufacture of centrifugally cast prestressed concrete poles.
- Design**
1. Poles shall be designed considering application of wind load and dead load.
 2. The moment at any point along the length of the pole is the sum of the moments resulting from dead loads and forces from wind loads. The wind force is equal to the wind pressure multiplied by the effective projected area (EPA) of the objects involved.
 3. Poles shall be designed to withstand a constant wind speed of 90, 100, 110, 120, 130, 140 or 150 MPH.
- Materials**
- Concrete**
The pole shall achieve a minimum 28-day compressive strength of 8,000 psi. Cement shall conform to the latest requirements of Type III or Type I Portland Cement in accordance with ASTM-C150. Maximum size aggregate may be 3/4" inch (19mm) or 3/4" of the clear spacing between reinforcing steel and surface of pole. Any water reducers, retarders, or accelerating admixtures shall conform to ASTM-C494. Water shall be free from foreign materials in amounts harmful to concrete and embedded steel. In areas subject to frequent freeze/thaw conditions an air entrapment admixture shall be used to produce a 5-8% air content in the mix as measured prior to spinning.
- Reinforcing Steel**
Deformed steel reinforcement shall conform to requirements of ASTM A615 for Grade 60 Rebar.
- Prestressing Steel**
Prestressing steel reinforcement shall conform to uncoated 7-wire, stress relieved strand; ASTM-A416.
- Spiral Reinforcement**
Steel spiral reinforcement shall conform to the requirements of ASTM-A82 and shall not be less than .150 inch diameter.
- Hardware**
All structural steel shall conform to ASTM-A36 and zinc alloy AC41A shall conform to ASTM-B240. The finish shall be hot dipped galvanized in accordance with ASTM A153.
- Electrical Ground**
All sportslighting poles will be supplied with a #6 stranded copper ground wire cast into the wall of the pole.
- Manufacturing**
1. All manufacturing tolerance, details of reinforcement, and finishes shall be in accordance with the Guide Specification for Prestressed Concrete Poles as published in the May-June, 1982, issue of the Journal of the Prestressed Concrete Institute.
 2. A concrete cylinder test shall be performed for each 100 cubic yards of concrete poured. A final quality control check shall be carried out on each pole after manufacturing is complete. All quality control procedures shall be mandated in a written manual and be available for inspection.
- Manufacturer**
The manufacturer shall have a minimum of 10 years of experience in the design and production of centrifugally spun concrete poles. The poles shall be manufactured by StressCrete.

General

1. Poles shall be prestressed and the concrete placed in steel molds by the centrifugal spinning process. This method of manufacture ensures maximum compression of concrete resulting in unsurpassed durability.
2. Poles shall have a smooth natural form finish, soft gray in color.
3. Poles shall be designed and constructed so that all wiring and grounding facilities are concealed within the pole. All handholes, couplings, inserts for step bolts, thru-bolt holes and ground wire shall be cast into the pole during the manufacturing process.
4. Poles shall be round in cross section and provide a continuous taper of .18" per foot of length and provide a minimum 3/4" of concrete coverage over the longitudinal steel.
5. All cable entry holes shall be in accordance with the location and sizes as required by the buyer and shall be free from sharp edges for passages of electrical wiring. All handhole frames shall be composed of a non-metallic, non-conductive injection molded material or a rugged high density cast zinc.
 - A. A 3" x 12" or 4" x 10" conduit entrance opening centered 18" below grade (depending on size of pole).
 - B. A 3.5" x 10.5" handhole frame with flush cover centered 3' 6" above grade (or as specified).
 - C. A 2.5"x 8.5" handhole frame with flush cover located 180 degrees from disconnect switches.
 - D. Top wiring will be through a 2" or 1 1/2" threaded coupling which ever is suitable for the diameter of the pole with access by way of a 2 1/2" x 8" handhold frame with flush cover located at platform/crossarm level for use during installation and maintenance of electrical wiring. A "J" hook wire hanger will be provided at top coupling location for use with kellems grip. Or as needed by specifier.
 - E. All poles shall be provided with a fish wire to facilitate cable installation.
6. (Optional) Step bolts, 5/8" x 7" long step bolts complete with locking nuts, on staggered 15" centers. Steps will begin at 15' above groundline. Preferably step bolts to be on 15" centers and 180 degrees apart or as may be specified.
7. An aluminum nameplate cast into the wall of the pole approximately 4' 5" above the ground-line identifying the manufacturer, manufacture date, length, weight, class and fabrication number.
8. (Optional) Lightning protection system.

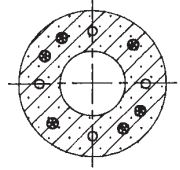
(Optional) Safety Climbing Cable shall be 5/16" diameter galvanized stranded cable. Cable will be shipped loose for field installation. Cable shall run the length of pole attaching to the top of the platform to allow climber to enter platform prior to disengaging safety harness.
10. (Optional) Safety harness and quick stop assembly.

Handling and Erection

1. Prestressed concrete poles shall be lifted and supported during manufacturing, stockpiling, transporting and erection operations only at the points shown on the shop drawings.
2. Transportation, site handling, and erection shall be performed with acceptable equipment and methods, and by qualified personnel.

Sportslighting

35ft - 40ft & 45ft Above Grade Pole Heights



Physical Details:

- round symmetrically tapered shaft.
- 0.18" per linear ft. taper increase.
- mold finish is standard but optional etched Decor colors are available.
- various bullhorn, crossarm and platform configurations are available.

The poles cataloged below represent a sampling only. Other heights and strengths are available upon request.

Pole Catalog Number	Pole Height Above Grade (ft)*	Overall Pole Length (ft)	Pole Tip Diameter (Inches)	Pole Butt Diameter (Inches)	Nominal Pole Weight (lbs.)	Maximum EPA (sq. ft.)**						
						90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	150 mph

41ft Overall Pole Length

E-410-BPR-G	35' 0"	41' 0"	4.75	12.13	2190	18	14	12	9	7	6	4
E-410-CPR-G	35' 0"	41' 0"	6.50	13.88	2770	27	21	16	13	10	8	6
E-410-DPR-G	35' 0"	41' 0"	6.50	13.88	2780	35	27	22	17	14	11	9
E-410-EPR-G	35' 0"	41' 0"	6.50	13.88	2795	46	36	29	23	19	16	13
E-410-FPR-G	35' 0"	41' 0"	6.50	13.88	3150	59	47	38	31	26	21	18

46ft Overall Pole Length

E-460-CPR-G	40' 0"	46' 0"	6.50	14.78	3400	25	19	15	11	9	7	5
E-460-DPR-G	40' 0"	46' 0"	6.50	14.78	3420	33	26	20	16	13	10	8
E-460-EPR-G	40' 0"	46' 0"	6.50	14.78	3440	44	34	27	22	18	14	12
E-460-FPR-G	40' 0"	46' 0"	6.50	14.78	3775	57	45	36	29	24	20	17
E-460-GPR-G	40' 0"	46' 0"	8.50	16.53	4525	72	57	46	37	30	25	21

52ft Overall Pole Length

E-520-DPR-G	45' 0"	52' 0"	6.50	15.86	4180	32	24	19	15	11	9	7
E-520-EPR-G	45' 0"	52' 0"	6.50	15.86	4190	42	33	26	20	16	13	10
E-520-FPR-G	45' 0"	52' 0"	6.50	15.86	4580	55	43	35	28	23	18	15
E-520-GPR-G	45' 0"	52' 0"	8.25	17.61	5430	70	55	44	35	29	23	19
E-520-HPR-G	45' 0"	52' 0"	8.25	17.61	5460	88	69	56	46	37	31	26
E-520-JPR-G	45' 0"	52' 0"	8.25	17.61	5505	109	86	70	57	47	40	33

* Embedment depths are assumed at 10% of pole length plus 2 ft. Footings are dependent upon soil strengths and must be sized to withstand the applied pole loadings.

** EPA calculations are as per AASHTO criteria set forth in the 2001 "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals." If you are unsure of the wind condition in a project's location, please reference the isotach map in the "General and Technical" section.

Optional Etched Decor Colors

Mold finish is standard on all sportslighting poles. As well as cost effective, its pleasing color allows the poles to blend into most natural settings.

If a colored pole is desired, any of our standard etched Decor colors are available, but must be specified in the pole catalog number.

Color Finish	Eclipse (Black)	Ash White	Pearl Gray	Dusty Rose	Aztec Jade (Green)	Desert Sand (Buff)	Saluki Bronze (Brown)
Etched	E11	E35	E40	E41	E51	E70	E90

Sportlighting Accessories

Spun concrete poles can be adapted to fit most sportlighting accessories. Standard accessories such as step bolts, safety climbing system, lightning protection system, bullhorns, crossarms and platforms are detailed near the end of this section. If specific items are not shown, please call your local representative or our sales office.

Finishes

Mold finish is standard on all poles. Etched Decor or custom color finishes must be specified in the pole catalog number. Please see the front page of this brochure for information, or turn to Decor section.

Standard Openings & Handholes

(For more detailed information, please reference General & Technical section).

- 3 1/2" x 10 1/2" is the standard handhole box located 42" above grade. Both it and the tight fitting coverplate are available in non-metallic, non-conductive injection molded material or a rugged high density cast zinc.
- Standard coverplate fasteners are 1/4" stainless steel with either Allen (hex) head for the United States or black Robertson #3 (square) head in Canada. Tamperproof and non standard fasteners are available but must be specified.

The standard below grade wiring aperture is 3" x 12", located in line with the above grade handhole, 18" below grade.

- Top wiring access is through a 1 1/2" coupling. The pole cap is removable to allow ease of wiring; a 1 1/2 x 3 aperture opening may be specified as an alternative.

The above represents our standards only. We will be happy to discuss custom requirements with you.

Electrical Ground

All sportlighting poles will be supplied with a #6 stranded copper ground wire. When properly connected, this will electrically ground the pole.

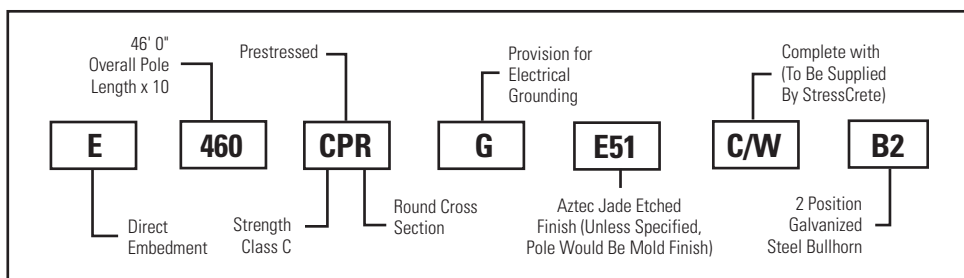
Footings

The standard method of installation for sportlighting poles is direct burial. The cost savings achieved by eliminating expensive foundations, together with resulting ease of installation, are generally quite significant. Base plate mounting can, however, be made available for most poles when required.

For details, please contact your local representative or our sales office.

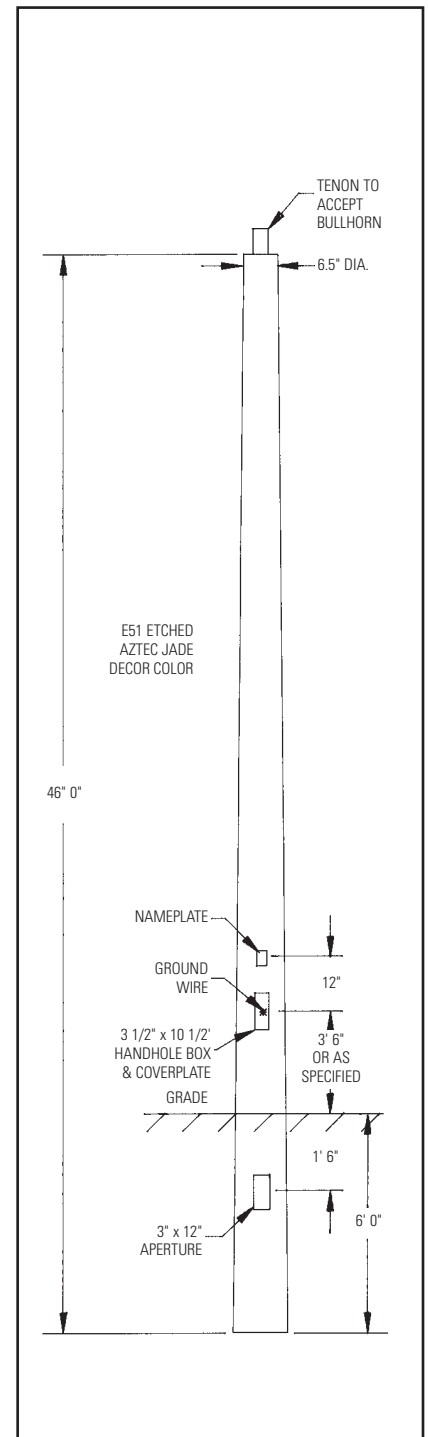
For catalog purposes we have assumed the standard rule of thumb for direct burial section as 10% of the pole length plus 2 ft. However, whether an anchor base or direct burial installation, care must be taken to ensure a proper sized footing is designed. For more detailed information, please refer to General and Technical Information section of this catalog.

Typical Catalog Numbers



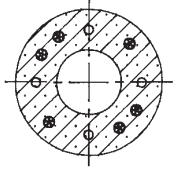
Typical for all types:

1. Based on desired pole length and EPA loading, select pole catalog number from charts.
2. If a color is desired, select an etched Decor color. (If not indicated, pole will be natural mold finish)
3. Select sportlighting accessories e.g. crossarms etc..



Sportslighting

50ft - 55ft & 60ft Above Grade Pole Heights



Physical Details:

- round symmetrically tapered shaft.
- 0.18" per linear ft. taper increase.
- mold finish is standard but optional etched Decor colors are available.
- various bullhorn, crossarm and platform configurations are available.

The poles cataloged below represent a sampling only. Other heights and strengths are available upon request.

Pole Catalog Number	Pole Height Above Grade (ft)*	Overall Pole Length (ft)	Pole Tip Diameter (Inches)	Pole Butt Diameter (Inches)	Nominal Pole Weight (lbs.)	Maximum EPA (sq. ft.)**						
						90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	150 mph

57ft Overall Pole Length

E-570-DPR-G	50' 0"	57' 0"	6.50	16.76	4925	30	23	17	13	10	7	5
E-570-EPR-G	50' 0"	57' 0"	6.50	16.76	4935	40	31	24	19	15	12	9
E-570-FPR-G	50' 0"	57' 0"	6.50	16.76	5295	53	41	33	26	21	17	14
E-570-GPR-G	50' 0"	57' 0"	8.25	18.51	6225	67	52	42	33	27	22	18
E-570-HPR-G	50' 0"	57' 0"	8.25	18.51	6265	85	67	54	43	35	29	24
E-570-JPR-G	50' 0"	57' 0"	8.25	18.51	6315	106	84	67	55	45	38	32

63ft Overall Pole Length

E-630-DPR-G	55' 0"	63' 0"	6.50	17.84	5875	28	21	16	12	9	6	4
E-630-EPR-G	55' 0"	63' 0"	6.50	17.84	5895	39	29	23	18	14	10	8
E-630-FPR-G	55' 0"	63' 0"	6.50	17.84	6215	51	40	31	25	20	16	12
E-630-GPR-G	55' 0"	63' 0"	8.25	19.59	7240	65	50	40	31	25	20	16
E-630-HPR-G	55' 0"	63' 0"	8.25	19.59	7300	82	65	51	41	34	27	22
E-630-JPR-G	55' 0"	63' 0"	8.25	19.59	7360	103	81	65	53	43	36	30

68ft Overall Pole Length

E-680-DPR-G	60' 0"	68' 0"	6.50	18.74	6586	27	20	14	10	7	5	3
E-680-EPR-G	60' 0"	68' 0"	6.50	18.74	6675	37	28	21	16	12	9	6
E-680-FPR-G	60' 0"	68' 0"	6.50	18.74	7030	49	38	29	23	18	14	11
E-680-GPR-G	60' 0"	68' 0"	8.25	20.49	8125	62	48	38	30	23	18	14
E-680-HPR-G	60' 0"	68' 0"	8.25	20.49	8210	80	62	49	39	32	26	21
E-680-JPR-G	60' 0"	68' 0"	8.25	20.49	8575	100	78	63	51	41	34	28
E-680-KPR-G	60' 0"	68' 0"	9.50	21.74	9170	121	95	76	62	51	42	35

* Embedment depths are assumed at 10% of pole length plus 2 ft. Footings are dependent upon soil strengths and must be sized to withstand the applied pole loadings.

** EPA calculations are as per AASHTO criteria set forth in the 2001 "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals." If you are unsure of the wind condition in a project's location, please reference the isotach map in the "General and Technical" section.

Optional Etched Decor Colors

Mold finish is standard on all sportslighting poles. As well as cost effective, its pleasing color allows the poles to blend into most natural settings.

If a colored pole is desired, any of our standard etched Decor colors are available, but must be specified in the pole catalog number.

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Etched	E11	E35	E40	E41	E51	E70	E90

Sportlighting Accessories

Spun concrete poles can be adapted to fit most sportlighting accessories. Standard accessories such as step bolts, safety climbing system, lightning protection system, bullhorns, cross arms and platforms are detailed near the end of this section. If specific items are not shown, please call your local representative or our sales office.

Finishes

Mold finish is standard on all poles. Etched Decor or custom color finishes must be specified in the pole catalog number. Please see the front page of this brochure for information, or turn to Decor section.

Standard Openings & Handholes

(For more detailed information, please reference General & Technical section).

- 3 1/2" x 10 1/2" is the standard handhole box located 42" above grade. Both it and the tight fitting coverplate are available in non-metallic, non-conductive injection molded material or a rugged high density cast zinc.
- Standard coverplate fasteners are 1/4" stainless steel with either Allen (hex) head for the United States or black Robertson #3 (square) head in Canada. Tamperproof and non standard fasteners are available but must be specified.

The standard below grade wiring aperture is 4" x 10", located in line with the above grade handhole, 18" below grade.

- Top wiring will be through a 2" threaded coupling with access by way of a 2 1/2" and 8" handhole, 180 degrees to the coupling, at each platform/crossarm level. A "J" hook wire hanger will be provided at top coupling location only.

The above represent our standards only. We will be happy to discuss custom requirements with you.

Electrical Ground

All sportlighting poles will be supplied with a #6 stranded copper ground wire. When properly connected, this will electrically ground the pole.

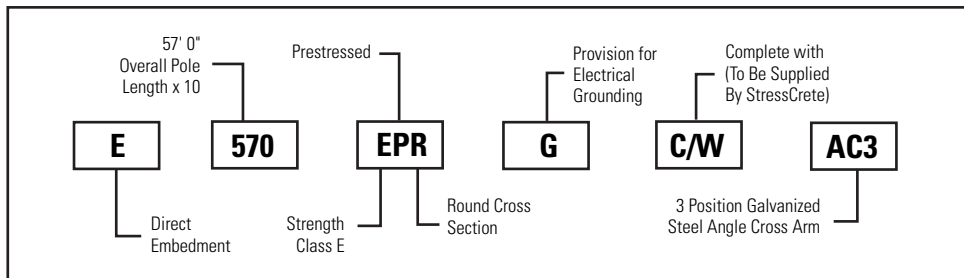
Footings

The standard method of installation is direct burial. The cost savings achieved by eliminating expensive foundations, together with resulting ease of installation, are generally quite significant.

Base plate mounting can, however, be made available for most poles when required. For details, please contact your local representative or our sales office.

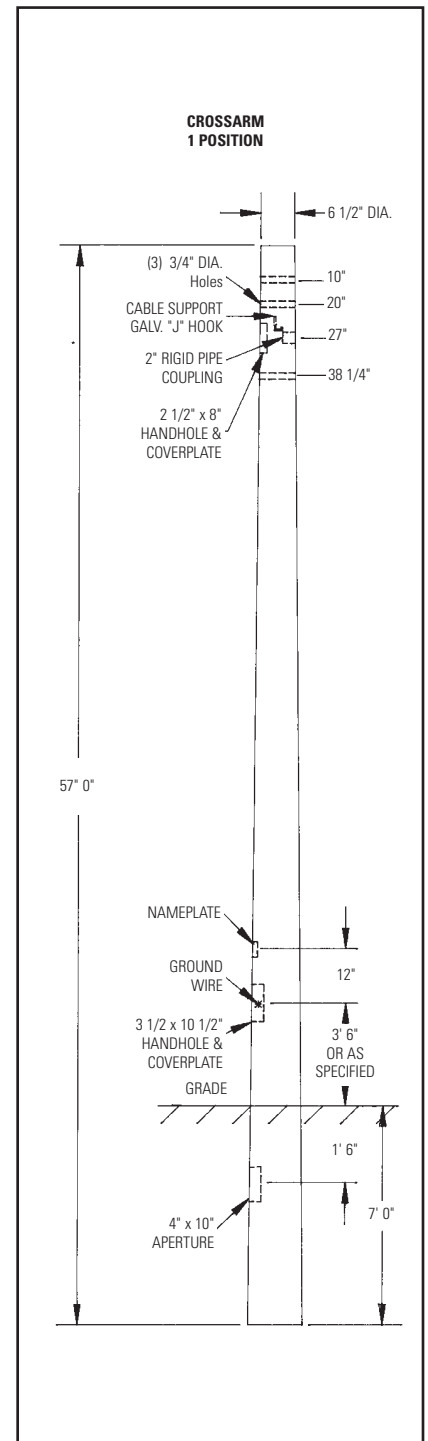
For catalog purposes we have assumed the standard rule of thumb for direct burial section as 10% of the pole length plus 2 ft. However, whether an anchor base or direct burial installation, care must be taken to ensure a proper sized footing is designed. For more detailed information, please refer to General and Technical Information section of this catalog.

Typical Catalog Numbers



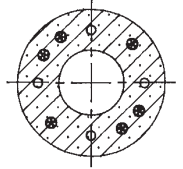
Typical for all types:

1. Based on desired pole length and EPA loading, select pole catalog number from charts.
2. If a color is desired, select an etched Decor color. (If not indicated, pole will be natural mold finish)
3. Select sportlighting accessories e.g. crossarms etc..



Sportslighting

65ft - 70ft & 75ft Above Grade Pole Heights



Physical Details:

- round symmetrically tapered shaft
- 0.18" per linear ft. taper increase
- mold finish is standard but optional etched Decor colors are available
- various bullhorn, crossarm and platform configurations are available

The poles cataloged below represent a sampling only. Other heights and strengths are available upon request.

Pole Catalog Number	Pole Height Above Grade (ft)*	Overall Pole Length (ft)	Pole Tip Diameter (Inches)	Pole Butt Diameter (Inches)	Nominal Pole Weight (lbs.)	Maximum EPA (sq. ft.)**						
						90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	150 mph

74ft Overall Pole Length

E-740-GPR-G	65' 0"	74' 0"	8.25	21.57	9905	60	46	36	28	22	17	13
E-740-HPR-G	65' 0"	74' 0"	8.25	21.57	10015	77	60	47	37	30	24	19
E-740-JPR-G	65' 0"	74' 0"	8.25	21.57	10085	97	76	60	48	39	32	26
E-740-KPR-G	65' 0"	74' 0"	9.50	22.82	11200	117	92	74	59	48	40	33
E-740-LPR-G	65' 0"	74' 0"	9.50	22.82	11250	142	112	90	73	60	50	41
E-740-MPR-G	65' 0"	74' 0"	9.50	22.82	11405	169	134	108	88	73	61	51

79ft Overall Pole Length

E-790-GPR-G	70' 0"	79' 0"	8.25	22.47	11000	58	44	34	26	20	15	11
E-790-HPR-G	70' 0"	79' 0"	8.25	22.47	11185	75	58	45	35	28	22	17
E-790-JPR-G	70' 0"	79' 0"	8.25	22.47	11250	94	73	58	46	37	30	24
E-790-KPR-G	70' 0"	79' 0"	9.50	23.72	12005	113	89	70	56	45	37	30
E-790-LPR-G	70' 0"	79' 0"	9.50	23.72	12175	138	108	86	70	57	47	38
E-790-MPR-G	70' 0"	79' 0"	9.50	23.72	12380	164	130	104	85	70	58	48
E-790-NPR-G	70' 0"	79' 0"	11.25	25.47	13865	192	152	123	100	83	69	57

85ft Overall Pole Length

E-850-GPR-G	75' 0"	85' 0"	8.25	23.55	11916	53	39	29	21	15	11	7
E-850-HPR-G	75' 0"	85' 0"	8.25	23.55	12533	70	53	40	31	23	18	13
E-850-JPR-G	75' 0"	85' 0"	8.25	23.55	12700	89	68	53	42	33	26	20
E-850-KPR-G	75' 0"	85' 0"	9.50	24.80	13455	110	86	68	54	43	34	28
E-850-LPR-G	75' 0"	85' 0"	9.50	24.80	13618	134	105	84	67	54	44	36
E-850-MPR-G	75' 0"	85' 0"	9.50	24.80	13845	161	126	101	82	67	55	46
E-850-NPR-G	75' 0"	85' 0"	11.25	26.55	15430	188	149	119	97	80	66	55

* Embedment depths are assumed at 10% of pole length plus 2 ft. Footings are dependent upon soil strengths and must be sized to withstand the applied pole loadings.

** EPA calculations are as per AASHTO criteria set forth in the 2001 "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals." If you are unsure of the wind condition in a project's location, please reference the isotach map in the "General and Technical" section.

Optional Etched Decor Colors

Mold finish is standard on all sportslighting poles. As well as cost effective, its pleasing color allows the poles to blend into most natural settings.

If a colored pole is desired, any of our standard etched Decor colors are available, but must be specified in the pole catalog number.

Color Finish	Eclipse (Black)	Ash White	Pearl Gray	Dusty Rose	Aztec Jade (Green)	Desert Sand (Buff)	Saluki Bronze (Brown)
Etched	E11	E35	E40	E41	E51	E70	E90

Sportslighting Accessories

Spun concrete poles can be adapted to fit most sportslighting accessories. Standard accessories such as step bolts, safety climbing system, lightning protection system, bullhorns, cross arms and platforms are detailed near the end of this section. If specific items are not shown, please call your local representative or our sales office.

Finishes

Mold finish is standard on all poles. Etched Decor or custom color finishes must be specified in the pole catalog number. Please see the front page of this brochure for information, or turn to Decor section.

Standard Openings & Handholes

(For more detailed information, please reference General & Technical section).

- 3 1/2" x 10 1/2" is the standard handhole box located 42" above grade. Both it and the tight fitting coverplate are available in non-metallic, non-conductive injection molded material or a rugged high density cast zinc.
- Standard coverplate fasteners are 1/4" stainless steel with either Allen (hex) head for the United States or black Robertson #3 (square) head in Canada. Tamperproof and non standard fasteners are available but must be specified.

The standard below grade wiring aperture is 4" x 10", located in line with the above grade handhole, 18" below grade.

- Top wiring will be through a 2" threaded coupling with access by way of a 2 1/2" and 8" handhole, 180 degrees to the coupling, at each platform/crossarm level. A "J" hook wire hanger will be provided at top coupling location only.

The above represents our standards only. We will be happy to discuss custom requirements with you.

Electrical Ground

All sportslighting poles will be supplied with a #6 stranded copper ground wire. When properly connected, this will electrically ground the pole.

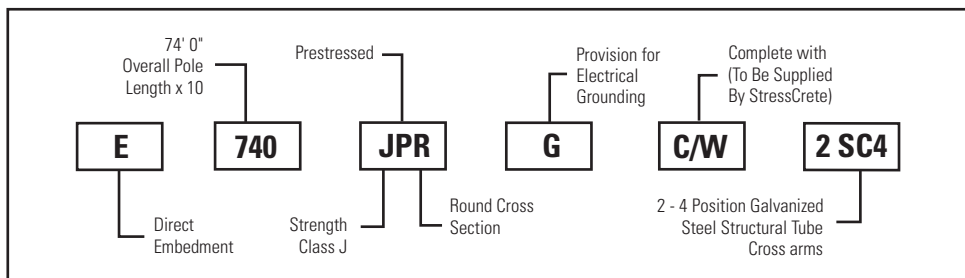
Footings

The standard method of installation is direct burial. The cost savings achieved by eliminating expensive foundations, together with resulting ease of installation, are generally quite significant.

Base plate mounting can, however, be made available for most poles when required. For details, please contact your local representative or our sales office.

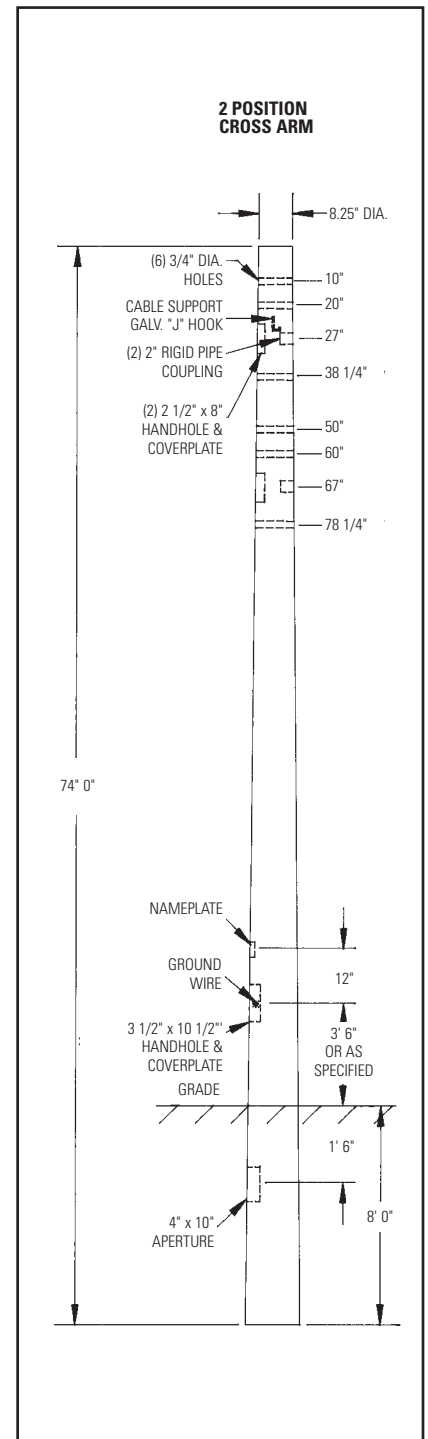
For catalog purposes we have assumed the standard rule of thumb for direct burial section as 10% of the pole length plus 2 ft. However, whether an anchor base or direct burial installation, care must be taken to ensure a proper sized footing is designed. For more detailed information, please refer to General and Technical Information section of this catalog.

Typical Catalog Numbers



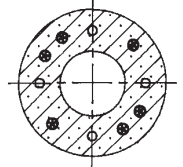
Typical for all types:

1. Based on desired pole length and EPA loading, select pole catalog number from charts.
2. If a color is desired, select an etched Decor color. (If not indicated, pole will be natural mold finish)
3. Select sportslighting accessories e.g. crossarms etc..



Sportslighting

80ft, 85ft, 90ft & 98ft Above Grade Pole Heights



Physical Details:

- round symmetrically tapered shaft
- 0.18" per linear ft. taper increase
- mold finish is standard but optional etched Decor colors are available
- various bullhorn, crossarm and platform configurations are available

The poles cataloged below represent a sampling only. Other heights and strengths are available upon request.

Pole Catalog Number	Pole Height Above Grade (ft)*	Overall Pole Length (ft)	Pole Tip Diameter (Inches)	Pole Butt Diameter (Inches)	Nominal Pole Weight (lbs.)	Maximum EPA (sq. ft.)**						
						90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	150 mph

90ft Overall Pole Length

E-900-GPR-G	80' 0"	90' 0"	8.25	24.45	13300	48	37	26	20	12	5	N/A
E-900-HPR-G	80' 0"	90' 0"	8.25	24.45	13550	66	52	37	29	19	11	4
E-900-JPR-G	80' 0"	90' 0"	8.25	24.45	13700	86	67	51	40	30	22	15
E-900-KPR-G	80' 0"	90' 0"	9.50	25.70	14900	108	84	66	52	41	33	26
E-900-LPR-G	80' 0"	90' 0"	9.50	25.70	15250	132	103	82	65	53	43	35
E-900-MPR-G	80' 0"	90' 0"	9.50	25.70	15400	158	124	99	80	65	53	44
E-900-NPR-G	80' 0"	90' 0"	11.25	27.45	16980	185	146	117	95	78	64	53

96ft Overall Pole Length

E-960-KPR-G	85' 0"	96' 0"	9.50	26.78	17195	105	81	63	50	39	31	24
E-960-LPR-G	85' 0"	96' 0"	9.50	26.78	17330	128	100	79	63	50	41	33
E-960-MPR-G	85' 0"	96' 0"	9.50	26.78	17430	154	121	96	77	63	51	42
E-960-NPR-G	85' 0"	96' 0"	11.25	28.53	18635	181	142	114	92	75	62	51

101ft Overall Pole Length

E-1010-KPR-G	90' 0"	101' 0"	9.50	27.68	18620	102	78	61	48	37	29	22
E-1010-LPR-G	90' 0"	101' 0"	9.50	27.68	18755	125	97	76	61	48	38	31
E-1010-MPR-G	90' 0"	101' 0"	9.50	27.68	18875	151	118	93	75	60	49	40
E-1010-NPR-G	90' 0"	101' 0"	11.25	29.18	19815	177	139	111	89	73	59	49

110ft Overall Pole Length

E-1100-KPR-G	98' 0"	110' 0"	9.50	29.30	21745	98	74	57	44	34	26	19
E-1100-LPR-G	98' 0"	110' 0"	9.50	29.30	21800	121	93	72	57	45	35	27
E-1100-MPR-G	98' 0"	110' 0"	9.50	29.30	22035	146	113	89	71	57	45	36

* Embedment depths are assumed at 10% of pole length plus 2 ft. Footings are dependent upon soil strengths and must be sized to withstand the applied pole loadings.

** EPA calculations are as per AASHTO criteria set forth in the 2001 "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals." If you are unsure of the wind condition in a project's location, please reference the isotach map in the "General and Technical" section.

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Color Finish	Eclipse (Black)	Ash White	Pearl Gray	Dusty Rose	Aztec Jade (Green)	Desert Sand (Buff)	Saluki Bronze (Brown)
Etched	E11	E35	E40	E41	E51	E70	E90

Sportlighting Accessories

Spun concrete poles can be adapted to fit most sportlighting accessories. Standard accessories such as step bolts, safety climbing system, lightning protection system, bullhorns, cross arms and platforms are detailed near the end of this section. If specific items are not shown, please call your local representative or our sales office.

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(For more detailed information, please reference General & Technical section).

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- Standard coverplate fasteners are 1/4" stainless steel with either Allen (hex) head for the United States or black Robertson #3 (square) head in Canada. Tamperproof and non standard fasteners are available but must be specified.

The standard below grade wiring aperture is 4" x 10", located in line with the above grade handhole, 18" below grade.

- Top wiring will be through a 2" threaded coupling with access by way of a 2 1/2" and 8" handhole, 180 degrees to the coupling, at each platform/crossarm level. A "J" hook wire hanger will be provided at top coupling location only.

The above represents our standards only. We will be happy to discuss custom requirements with you.

Electrical Ground

All sportlighting poles will be supplied with a #6 stranded copper ground wire. When properly connected, this will electrically ground the pole.

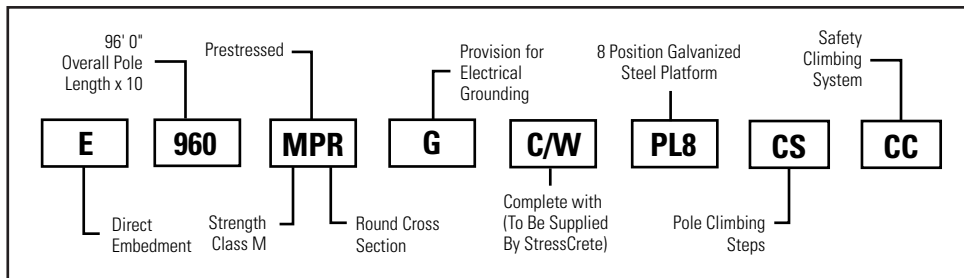
Footings

The standard method of installation is direct burial. The cost savings achieved by eliminating expensive foundations, together with resulting ease of installation, are generally quite significant.

Base plate mounting can, however, be made available for most poles when required. For details, please contact your local representative or our sales office.

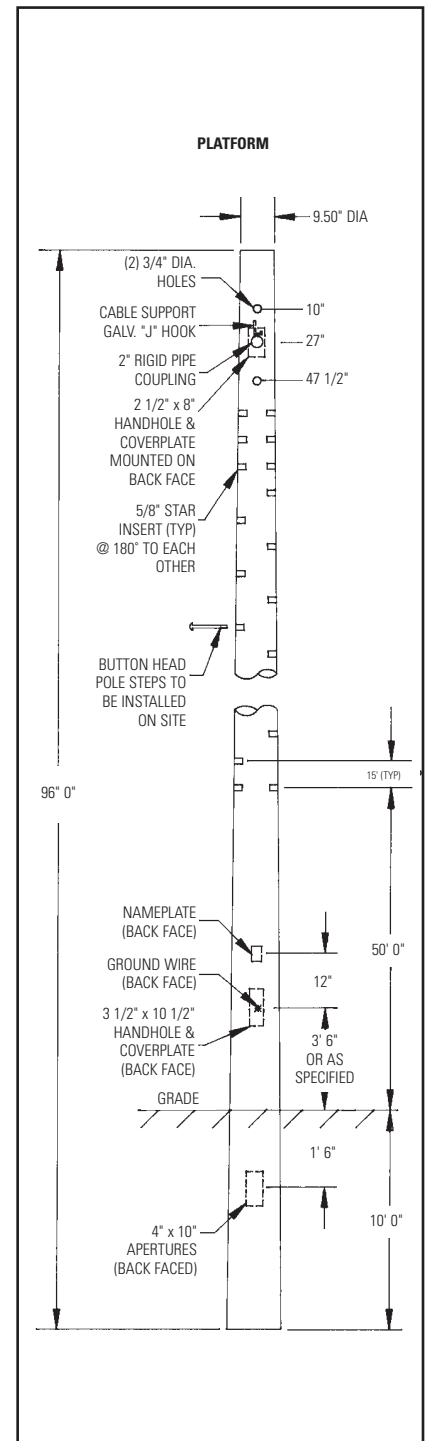
For catalog purposes we have assumed the standard rule of thumb for direct burial section as 10% of the pole length plus 2 ft. However, whether an anchor base or direct burial installation, care must be taken to ensure a proper sized footing is designed. For more detailed information, please refer to General and Technical Information section of this catalog.

Typical Catalog Numbers



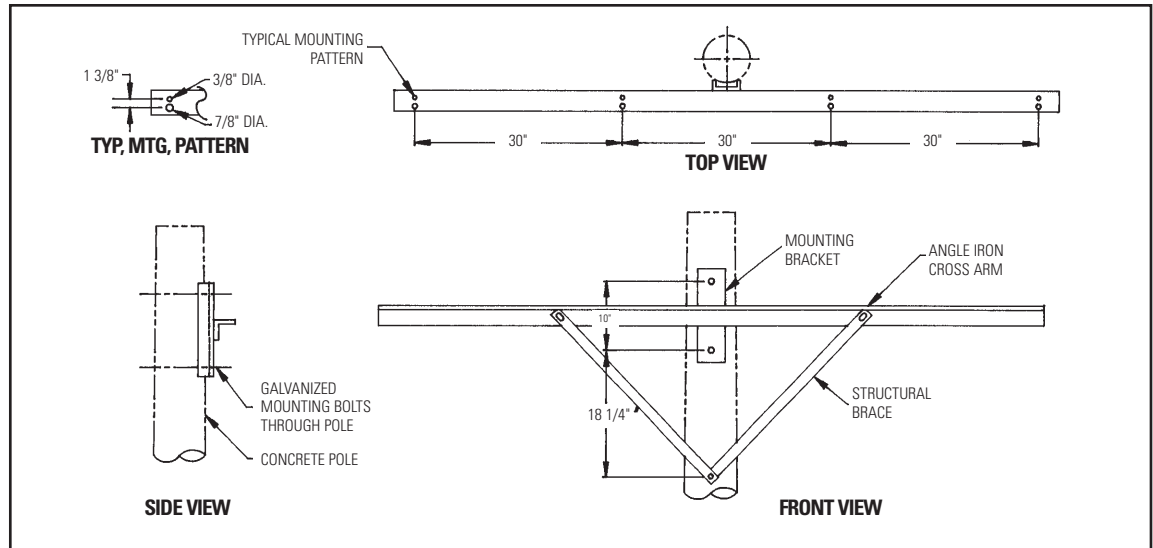
Typical for all types:

1. Based on desired pole length and EPA loading, select pole catalog number from charts.
2. If a color is desired, select an etched Decor color. (If not indicated, pole will be natural mold finish)
3. Select sportlighting accessories e.g. crossarms etc.



Angle Cross Arms

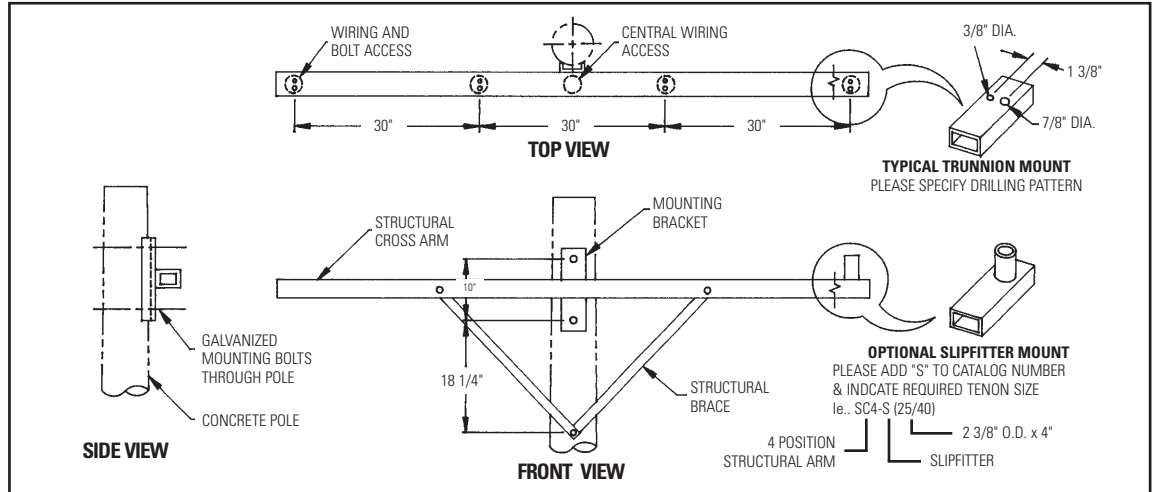
These cross arms are manufactured of hot dipped galvanized steel angles. If a special finish or color is required it must be specifically requested. We have shown typical trunnion mounting holes for a floodlight. As each lighting manufacturer has their own mounting configurations, care must be taken to ensure the correct mounting pattern is specified. This will ensure compatibility between cross arm and fixture.



Configurations	ANGLE CROSS ARM CATALOG NUMBER	CROSS ARM SIZE		MAXIMUM INDIVIDUAL FLOODLIGHT SIZE	
		E.P.A. (sq. ft.)	WEIGHT (lbs.)	E.P.A. (sq. ft.)	WEIGHT (lbs.)
<p>LUMINAIRE (BY OTHER)</p>	AC2	2.0	35	3.1	100
	AC3	3.5	60	3.1	100
	AC4	5.0	80	3.1	100
	AC6	10.0	160	3.1	100

Structural Cross Arms

Structural cross arms are manufactured of hot dipped galvanized hollow structural tubing. If a special finish or color is required it must be specifically requested. These arms will accommodate either a trunnion hole mount or a slipfit tenon mount for floodlighting. In each case, the lighting manufacturer will have their own mounting configuration. Care must be taken to ensure the correct mounting requirements are specified. **If specified we do offer an enclosed wiring system with optional pre-wiring.**

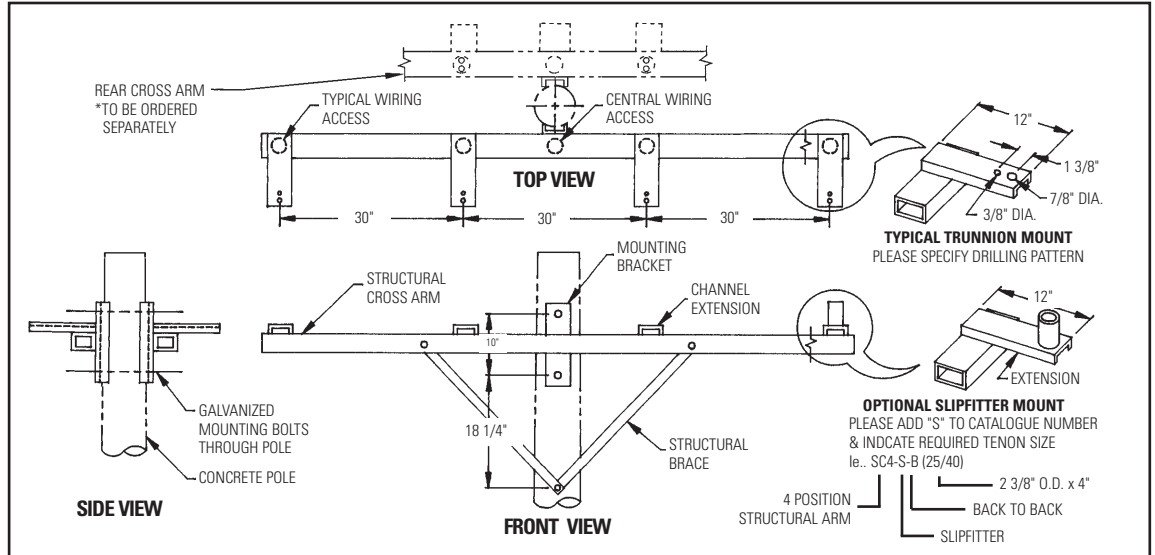


Configurations		STRUCTURAL CROSS ARM CATALOG NUMBER	CROSS ARM SIZE		MAXIMUM INDIVIDUAL FLOODLIGHT SIZE	
			E.P.A. (sq. ft.)	WEIGHT (lbs.)	E.P.A. (sq. ft.)	WEIGHT (lbs.)
		SC2 SC2-S	2.5	45	4.5	120
		SC3 SC3-S	4.0	75	4.5	120
		SC4 SC4-S	5.5	90	4.5	120
		SC5 SC5-S	6.0	115	4.5	120
		SC6 SC6-S	10.5	140	4.5	120

Back to Back Cross Arm Configurations

When mounting cross arms back to back, care must be taken to ensure the floodlight ballasts do not touch the ballasts on the opposite cross arm. On our larger pole top sizes this is generally not a problem, but on the smaller pole top sizes (4 3/4" & 6 1/2") it may be a concern. It is our recommendation that when cross arms are to be mounted back to back, both cross arms should have offset mounting positions as detailed below.

Two Cross Arms must be ordered.



Configurations		STRUCTURAL CROSS ARM CATALOG NUMBER	CROSS ARM SIZE		MAXIMUM INDIVIDUAL FLOODLIGHT SIZE	
			E.P.A. (sq. ft.)	WEIGHT (lbs.)	E.P.A. (sq. ft.)	WEIGHT (lbs.)
		SC2-B SC2-S-B	2.5	60	4.5	120
		SC3-B SC3-S-B	4.0	90	4.5	120
		SC4-B SC4-S-B	6.0	115	4.5	120
		SC5-B SC5-S-B	6.5	140	4.5	120
		SC6-B SC6-S-B	11.0	180	4.5	120

*** N.B. - As the back to back configurations may be uneven, the rear standard cross arm must be ordered separately.**

Bullhorn Brackets

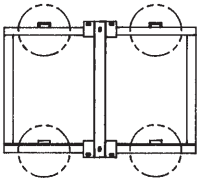
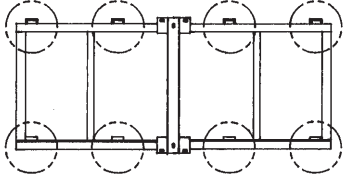
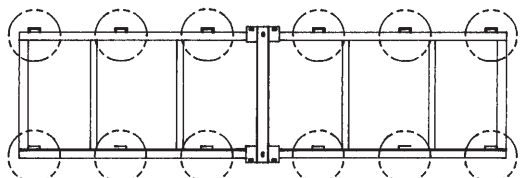
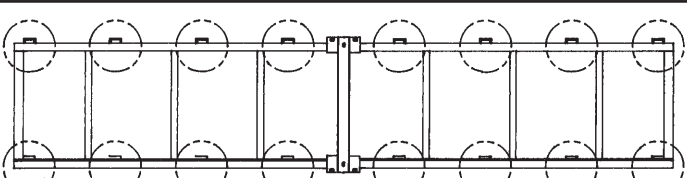
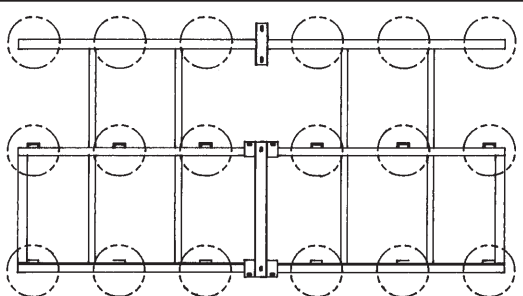
Bullhorns are available with 2 3/8" or 3" O.D. slipfitter tenons. Care must be taken when ordering that they are compatible with the fixture selected. They are manufactured from steel pipe with a hot dipped galvanized standard finish. If a special finish or color is required it must be specifically requested. All bullhorns are designed to fit a 2 3/8" O.D. x 6" long heavy duty pole tenon.

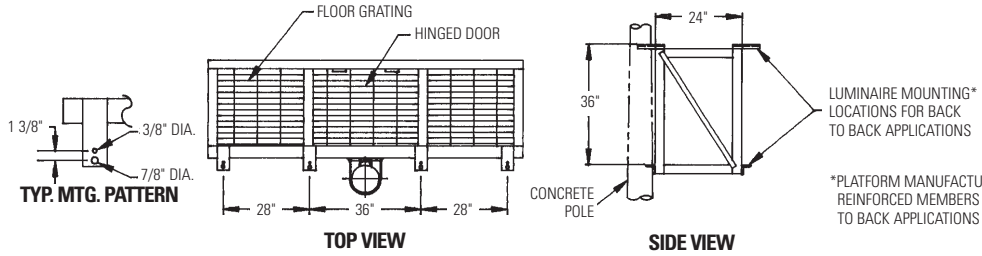
Configurations	BULLHORN CATALOG NUMBER	SLIPFITTER TENON DIAMETER (in.)	BULLHORN SIZE		MAXIMUM INDIVIDUAL FLOODLIGHT SIZE	
			E.P.A. (sq. ft.)	WEIGHT (lbs.)	E.P.A. (sq. ft.)	WEIGHT (lbs.)
	2B-25-180	2 3/8	1.0	21	4.0	100
	2B-30-180	3	1.1	23	5.0	120
	3B-25-180	2 3/8	1.2	36	4.0	100
	3B-30-180	3	1.3	39	5.0	120
	3B-25-120	2 3/8	1.7	34	4.0	100
	3B-30-120	3	1.8	36	5.0	120
	4B-25-180	2 3/8	1.5	46	4.0	100
	4B-30-180	3	1.6	49	5.0	120
	4B-25-90	2 3/8	2.5	49	3.9	100
	4B-30-90	3	2.6	52	4.5	120
	5B-25-180	2 3/8*	3.3	66	3.1	80
	5B-30-180	3	3.3	66	3.1	80

* TENON LENGTH 4"

Platforms

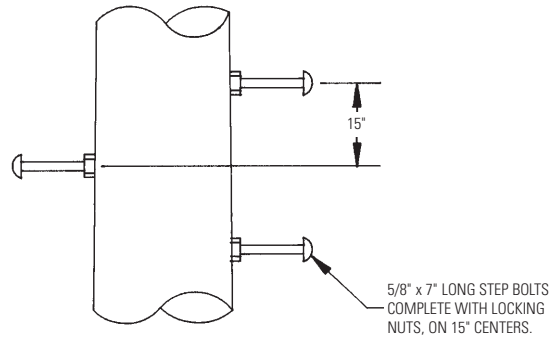
Platforms are manufactured of hot dipped galvanized steel. If a special finish or color is required it must be specifically requested. As each lighting manufacturer has their own fixture mounting configuration, care must be taken to ensure the correct mounting pattern is specified. This will ensure compatibility between platform and fixture.

Configurations	PLATFORM CATALOG NUMBER	NUMBER OF FLOODLIGHTS	PLATFORM SIZE	
			WEIGHT (lbs.)	E.P.A. (sq. ft.)
	PL4	4	300	8
	*PLB8	8 (4 BACK TO BACK)	400	8 1/2
	PL8	8	450	11
	*PLB16	16 (8 BACK TO BACK)	600	11 1/2
	PL12	12	600	18
	*PLB24	24 (12 BACK TO BACK)	750	19
	PL16	16	850	26
	*PLB32	32 (16 BACK TO BACK)	1000	27
	PL18M (PL12 & EXTRA AC6 CROSS ARM)	18	750	28

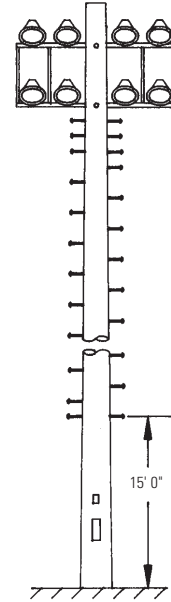


Sportlighting Accessories

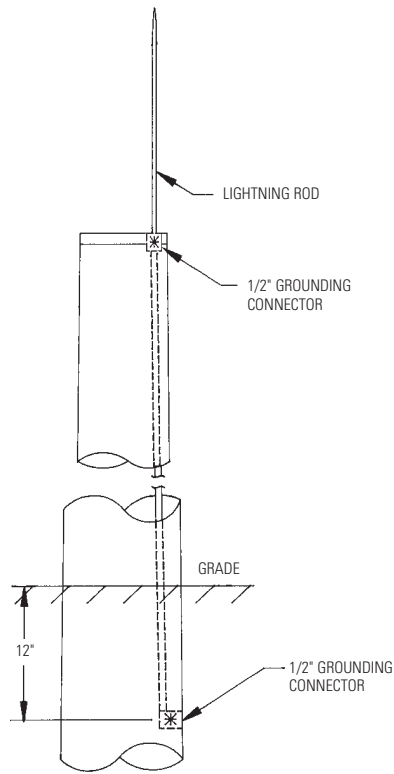
POLE STEPS - CAT. #PS



STEPS ARE SET AT 180° TO EACH OTHER EXCEPT ON THE LARGER POLES WHERE THEY MOVE TO 120° AT THE POINT WHERE THE POLE DIAMETER SURPASSES 19".

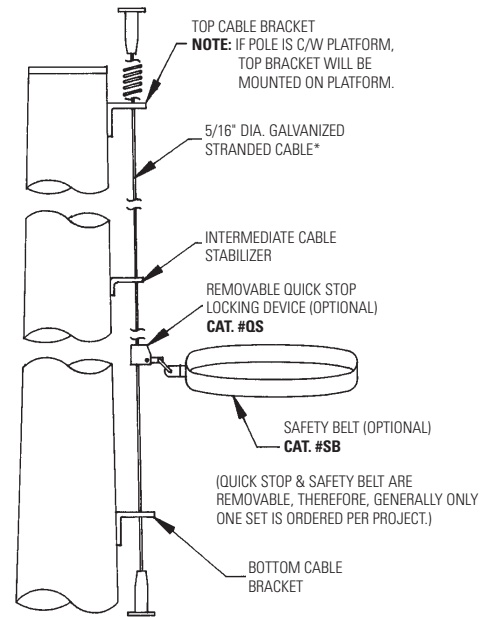


LIGHTNING PROTECTION SYSTEM - CAT. #LS



SAFETY CLIMBING SYSTEM

CLIMBING CABLE & POLE HARDWARE - CAT. #CC
(THIS DOES NOT INCLUDE QUICK STOP OR SAFETY BELT WHICH MUST BE ORDERED SEPARATELY.)



*STAINLESS STEEL CABLE IS AVAILABLE BUT MUST BE SPECIFICALLY REQUESTED.

Shipping, Handling and Installation of Concrete Poles.

- We ship by road, rail or water.
- Concrete poles will withstand a considerable amount of bending but should not be shocked whilst under load. Never lift pole from tip.

1. Poles up to 50'0" (15m) in length may be unloaded by using a one-point pick-up at the balance point but should never be carried this way. Generally for straight tapered poles this is 1/3 of length from pole butt.

A two-point pick-up with at least a 10 ft. (3m) separation must be used to transport poles on site, particularly over rough ground.

To erect the pole on site, the pick-up point must be above the point of balance so that the butt is dragged into the final position.

2. Poles over 50'0" (15m) in length must be unloaded by using a two-point pick-up with a separation of at least 20% of the length of the pole.

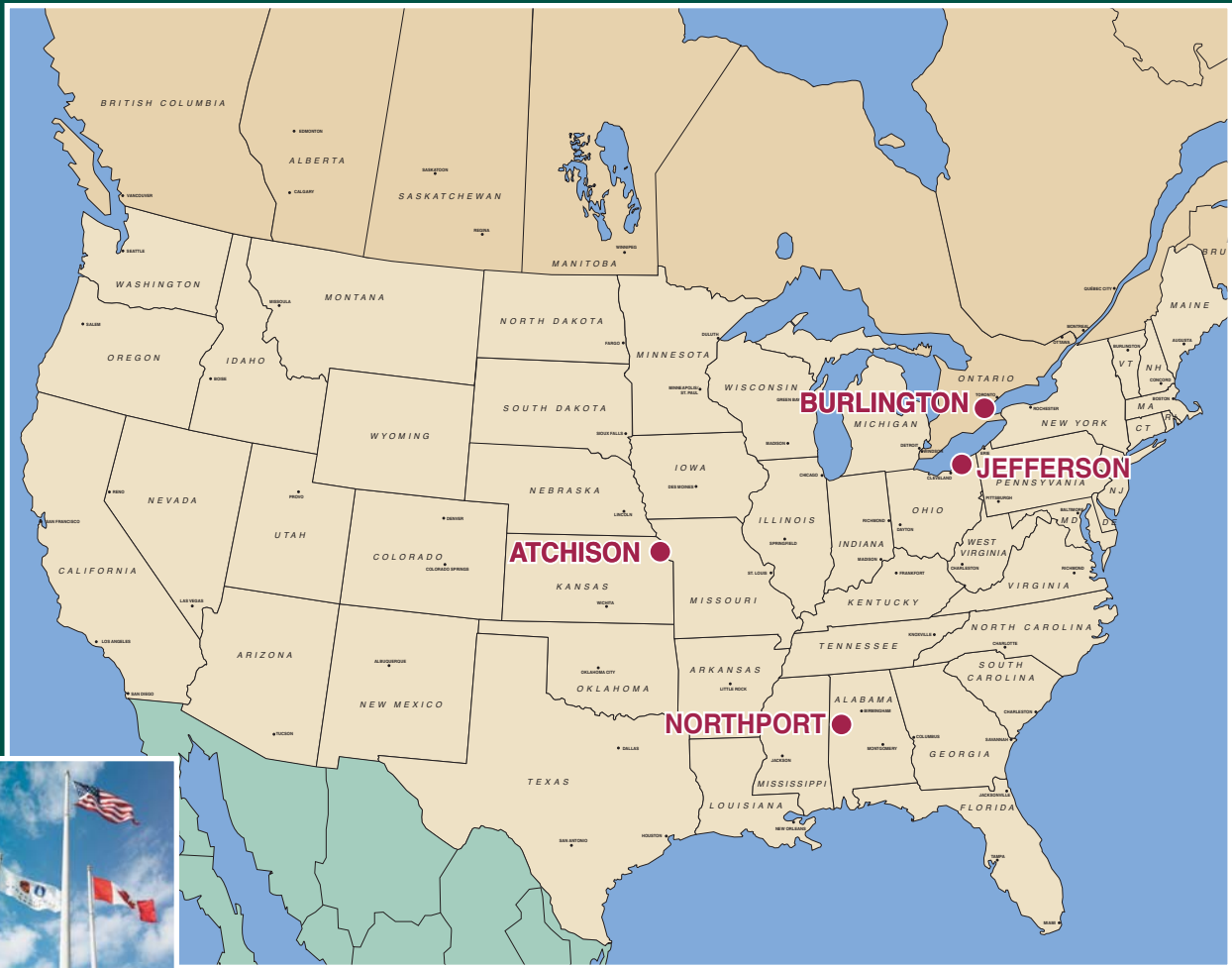
To erect poles clean (i.e. with no attachments; cross arms, floodlights, etc.) the top pick-up point must be used (this is normally 1/4 of the distance from the pole tip).

Where heavy hardware is being erected on the pole, contact manufacturer for location of top pick-up point.

For transportation over long distances, all poles must be supported throughout their length.

When stockpiling for any length of time, poles must be supported so that they do not bend under their own weight.





King Luminaire • StressCrete • Est. 1953

**STRESSCRETE
GROUP**

Quality People • Quality Products

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